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32498 7590 09/19/2007 CAPITOL PATENT & TRADEMARK LAW FIRM, PLLC ATTN: JOHN CURTIN P.O. BOX 1995 VIENNA, VA 22183			EXAMINER AGHDAM, FRESHTEH N	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/991,111
Filing Date: November 16, 2001
Appellant(s): DAS ET AL.

MAILED

SEP 19 2007

GROUP 2600

John E. Curtin
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/5/2007 appealing from the Office action mailed 1/5/2007.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 6,438,119) in view of the instant application's disclosed prior art. Claim 11 is rejected under 35 U.S.C. 103(a) as

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being unpatentable over Kim et al (US 6,438,119) in view of the instant application's disclosed prior art and Lee et al (IUS 6,621,873).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,438,119	KIM ET AL	8-2002
6,621,873	LEE ET AL	9-2003

THE INSTANT APPLICATION'S DISCLOSED PRIOR ART

(9) Grounds of Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-8, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 6,438,119), and further in view of the instant application's disclosed prior art.

As to claims 1 and 14, Kim discloses a method for processing control information in a wireless communication system via a dedicated control channel that could be shared among different users (Col. 6, Lines 30-35) that includes encoded signaling

information (Fig. 5A, means 519) for a corresponding data transmission in another channel (e.g. dedicated physical data channel) comprising: separately decoding at least a portion of the encoded signaling information (Fig. 5-9; 1st and 2nd decoders); and deriving transmission format information (Col. 9, Lines 33-67, Table 3) from the separately decoded portion of the encoded signaling information for the corresponding data transmission before a remainder of the encoded signaling information is decoded (Fig. 5-9; CRC detectors; Col. 7, lines 21-26 shows that the data transmission information is decoded (1st and 2nd decoders) before a remainder of the encoding information is decoded (CRC detectors) since CRC detectors correspond to the frame format of the signaling information; therefore, first the first portion(s) of the signaling information is decoded based on the frame format and then the remaining portion of the signaling information is decoded via CRC detectors). Kim is not explicit about using a shared control channel for processing control information. The instant application's disclosed prior art discloses using a shared control channel for processing control information (Pg. 1, Lines 16-35). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of the instant application's disclosed prior art with Kim in order to increase bandwidth efficiency by utilizing a shared control channel instead of a dedicated control channel.

As to claim 3, Kim teaches a dedicated control channel (Col. 1, Lines 47-52; Col. 5, Lines 9-18) used by a plurality of mobile stations for communicating with a base station (Col. 5, Lines 9-18). The control channel is used to send signaling

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information (Col. 1 Line 47; Col. 2, Line 24; Col. 13, Lines 51-64; Col.15, Line 67; Col. 16, Lines 1-28).

As to claim 4, Kim teaches a method for processing control information, wherein the control information, or signaling information, includes: transport format and resource-related information about the frame length of the data transmitted (Fig. 2C; Col. 2, Lines 14-25; Col. 7, Lines 21 -49); and cyclic redundancy check information (Col. 2, Lines 26-34; Col. 7, Lines 21-33).

As to claim 5, Kim teaches a method for processing control information, wherein the control information includes transport format and resource-related information, which includes transmission format information, Kim teaches the transmission format information in the form of frame length of the data transmitted (Col. 2, Lines 14-25., Col. 7, Lines 21-49); allocated rate of the data transmitted; allocated duration of the data transmitted; message identifier, direction, and type; and channel use starting time (Col. 9, Lines 33-68; Table 3).

As to claim 6, Kim teaches a method for processing control information, wherein the control information includes transmission format information such as transport block set size information (e.g. duration for the allocated channel/ Walsh code) and transport channel identification information (e.g. channel using start time and rate of the allocated channel/Walsh code) (Col. 9, Lines 33-68; Table 3).

As to claim 7, Kim teaches separately decoding a portion of the encoded signaling information is performed prior to the start of a transmission time interval

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corresponding to the data transmission (Fig. 5-9; Col. 5, Lines 10-18 and 60-65; Col. 6, Lines 30-35).

As to claim 8, Kim teaches convolutionally coding signaling information, and adding tail bits to the encoded signaling information (Col. 12, Lines 13-37).

As to claim 13, Kim discloses encoding the signal information such that portions (i.e. all the portions) of signaling information are encoded and one or more of the portions include transmission format information for the corresponding data transmission (Fig. 2 and 5, means 519; Col. 9, Lines 33-68; Table 3); and transmitting the encoded signaling information via a dedicated control channel that could be shared among a number of users (Col. 6, Lines 30-35) such that the transmission format information can be derived from the one or more portions of the encoded signaling information (Fig. 5 and 7; Col. 9, Table 3).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim and the instant application's disclosed prior art, further in view of Lee et al (US 6,621,873).

As to claim 12, Kim discloses processing information in a wireless communication system via a dedicated control channel that could be shared among different users (Col. 6, Lines 30-35) and includes encoded signaling information, wherein the encoded signaling information includes one or more portions of encoded information and decoding one or more portions of the encoded information to facilitate transmission in the wireless communication system (Fig. 5-9; Col. 5, Lines 10-18; Col. 9, Lines 33-67). Kim is silent about selectively puncturing bits from the encoded

signaling information such that the number of bits punctured from certain of the one or more portions is less than the number of bits punctured from the other portions; and separately decoding the certain one or more portions of the encoded signaling information to facilitate transmission in the wireless communication system. The instant application's disclosed prior art discloses using a shared control channel for processing control information to increase bandwidth efficiency by utilizing a shared control channel instead of a dedicated control channel (Pg. 1, Lines 16-35). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of the instant application's disclosed prior art with Kim for the reason stated above. Lee discloses selectively puncturing of bits from one or more portions in a frame that is less than the puncturing of the bits from the remaining portions of the frame (Col. 6, Lines 7-43; Fig. 3-5) by puncturing the first portion of the frame and not puncturing the second portion of the frame that includes tail symbols. One of ordinary skill in the art would recognize that the same puncturing scheme could be applied to a signaling frame as well. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Lee with Kim and the instant application's disclosed prior art in order to increase the decoding capability of the receiver, wherein one portion of the frame is punctured and the other portion of the frame is not punctured (Col. 6, Lines 32-37).

(10) Response to Argument

(A) Introduction

Prior to responding to the arguments, it is worthwhile to review the problem addressed by applicant's invention:

A wireless communication system provides a dedicated control channel is capable of efficiently communicating signaling information between a base station and a mobile station and that can be shared among different mobile stations (e.g. users) in order to utilize bandwidth in a more efficient manner. Ultimately, it is desirable to dedicate a control channel to each user exclusively; however, in order to comply with the FCC regulations and conserving bandwidth usage (limited resource(s)) it is desirable to share control channel(s) whenever and/ or as much as it is possible.

Generally for communicating information(s) that could be signaling and/ or user information, the information regardless of the type of information (e.g. signaling and/ or user information) is punctured according to a pattern.

(B) Response to Argument(s)

The examiner discusses the claims in the same order as the Appellant.

Claims 1, 3-10, and 13-14 in section VII (i.e. pages 4-5) appellant argues that Kim lacks a disclosure or suggestion of a shared control channel. Further, the text in the instant specification lacks the decoding features.

In response to the first argument made by the appellant regarding claims 1, 3-10, and 13-14, Kim discloses that the dedicated control channel can be shared by several mobile stations instead of being exclusively used by a particular mobile station (Col. 6, lines 30-35). Therefore, even Kim does not lack a disclosure or suggestion of a shared control channel. And also, the instant application's disclosed prior art discloses using a shared control channel for processing control information (Pg. 1, Lines 16-35).

Claim 12 in section VII (i.e. pages 5-6) appellant argues "Lee does not suggest the claimed puncturing features because it appears that Lee is directed at puncturing "tail symbols" that do not appear to be part of signaling information; rather, they are used for error checking (i.e. parity checking)."

In response to the second argument made by the appellant regarding claim 12, (1) Kim discloses processing information in a wireless communication system via a dedicated control channel that includes encoded signaling information, wherein the encoded signaling information includes one or more portions of encoded information and decoding one or more portions of the encoded information to facilitate transmission in the wireless communication system (Fig. 5-9); and puncturing the signaling information (Fig. 2; Fig. 5, means 529; Col. 14, Lines 17-28). Kim is silent about selectively puncturing bits from the encoded signaling information such that the number of bits punctured from certain of the one or more portions is less than the number of bits punctured from the other portions; and separately decoding the certain one or more portions of the encoded signaling information to facilitate transmission in the wireless

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communication system. Lee discloses selectively puncturing bits from one or more portions in a frame that is less than the puncturing of bits from the remaining portions of the frame (Col. 6, Lines 7-43; Fig. 3-5) by puncturing the first portion of the frame and not puncturing the second portion of the frame that includes tail symbols. One of ordinary skill in the art would recognize that similar puncturing scheme(s) could be applied to a signaling frame since both types of frames comprise bits or symbols and Kim discloses that the signaling information is encoded and punctured; and also, Lee discloses that one or more portions of a frame of symbols/bits is/are punctured more than the remaining portion or portions. (2) claim 12, lines 3-4, the appellant claims "wherein the encoded signaling information includes one or more portions of encoded information" and in the following limitation the appellant claims "selectively puncturing bits from the encoded signaling information such that the number of bits punctured from certain of the one or more portions is less than the number of bits punctured from other portions." If the first limitation is interpreted as all portions of encoded signaling information then the following limitation does not need to even be given weight to.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Freshteh N. Aghdam FA

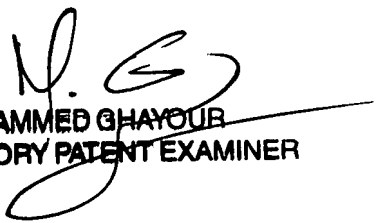
September 11, 2007

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